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CABBAGE CULTIVAR EVALUATION TRIALS

Dale W. Kretchman and Mark A. Jameson

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DEPARTMENT OF HORTICULTURE  
OHIO AGRICULTURAL RESEARCH AND DEVELOPMENT CENTER  
U.S. 250 and Ohio 83 South  
Wooster, Ohio

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## CABBAGE CULTIVAR EVALUATION TRIALS--1978

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The cabbage cultivar evaluation trials were conducted at the OARDC Green Springs Crops Research Unit near Green Springs. The soil is a sandy loam. The plots received 600 lb/A of 10-20-20 fertilizer, 1 lb/A boron and 4 lb/A of Diazinon pre-plant incorporated. In addition, 6-24-12 at 150 lb/A was banded in the rows at planting. Treflan at 1.0 lb/A was pre-plant incorporated for weed control.

The plots were field seeded on April 13 using a Planet-Jr. seeder. Rows were 30 ft. long on 30-in. centers. The rows were hand-thinned to give a 12-in. spacing. Each cultivar was replicated three times in the replicated trial.

Cultural care throughout the season was according to recommended procedures. No serious insect, disease or weed problems developed during the season. Monthly rainfall totals were:

|        |          |
|--------|----------|
| April  | 2.35 in. |
| May    | 3.26 in. |
| June   | 4.87 in. |
| July   | 2.19 in. |
| August | 3.92 in. |

When the majority of the heads of a cultivar reached marketable maturity, the authors evaluated each cultivar for external color, uniformity of head size and maturity, plant size, head shape, plant uprightness, and wrapper-leaf cover. In addition, the numbers of bursted and rotted heads were recorded. The mature heads were then harvested, counted and weighed. Four heads of each cultivar from each replicate were cut and the core length and polar and equatorial diameters recorded. One additional harvest was made for each cultivar when the majority of the remaining heads had reached marketable maturity.

Seed companies who supplied seed for these trials included: Joseph Harris Co., Inc., Rochester, New York; Northrup, King & Co., Minneapolis, Minn.; Asgrow Seed Co., Kalamazoo, Mich.; Stokes Seed Co., Buffalo, New York; A. L. Castle Inc., Morgan Hill, Calif.

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TABLE 1.--Yield and quality characteristics of cabbage cultivars from the replicated trial - 1978

| Cultivar     | Source        | Days* | First Harvest |              |            | Total Harvest |              | Measurements (in) |               |                    |
|--------------|---------------|-------|---------------|--------------|------------|---------------|--------------|-------------------|---------------|--------------------|
|              |               |       | tons/<br>acre | lbs/<br>head | %<br>harv. | tons/<br>acre | lbs/<br>head | Core<br>lgth.     | Polar<br>dia. | Equatorial<br>dia. |
| Market Prize | Harris        | 106   | 13.5          | 2.35         | 72.3       | 16.7          | 2.38         | 3.04              | 5.14          | 5.66               |
| Grandslam    | Northrup King | 106   | 18.3          | 3.08         | 71.3       | 22.0          | 2.93         | 2.56              | 5.64          | 6.18               |
| Tastie       | Northrup King | 103   | 15.8          | 2.92         | 65.6       | 16.9          | 2.76         | 2.67              | 6.22          | 5.56               |
| Enterprise   | Asgrow        | 106   | 20.1          | 2.76         | 85.8       | 21.0          | 2.63         | 2.93              | 6.18          | 5.68               |
| Express      | Asgrow        | 103   | 16.2          | 2.56         | 81.3       | 17.4          | 2.50         | 3.33              | 5.85          | 5.35               |
| Hybrid-N     | Harris        | 106   | 15.6          | 3.04         | 61.1       | 19.8          | 2.81         | 3.14              | 5.64          | 5.66               |
| Guardian     | Harris        | 106   | 13.5          | 2.55         | 75.7       | 15.7          | 2.45         | 2.41              | 5.33          | 5.64               |
| Defender     | Harris        | 106   | 15.4          | 2.07         | 90.9       | 15.4          | 2.07         | 2.29              | 5.33          | 5.21               |
| Geneva       | Harris        | 127   | 27.4          | 4.03         | 78.8       | 27.4          | 4.03         | 3.04              | 6.45          | 6.83               |
| Sanibel      | Harris        | 103   | 17.8          | 2.98         | 83.0       | 19.0          | 2.92         | 2.66              | 6.00          | 5.85               |
|              | LSD .05       | ---   | 6.43          | ----         | NS         | 8.53          | ----         | .468              | .499          | .734               |

\* Days indicates the number of days from seeding to first harvest.

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TABLE 2.--Quality characteristic ratings of cabbage cultivars from replicated trial - 1978\*

| Cultivar     | External<br>color | Plant<br>Uniformity | Plant<br>size | Head<br>shape | Upright-<br>ness | Leaf<br>cover | %<br>Burst |
|--------------|-------------------|---------------------|---------------|---------------|------------------|---------------|------------|
| Market Prize | 2.0               | 2.0                 | 2.0           | 2.0           | 1.0              | 1.0           | 0          |
| Grandslam    | 3.0               | 3.0                 | 3.0           | 2.0           | 2.0              | 1.0           | 0          |
| Tastie       | 1.0               | 1.3                 | 2.0           | 1.0           | 1.0              | 3.0           | 25.7       |
| Enterprize   | 2.0               | 2.0                 | 2.0           | 2.0           | 2.0              | 2.0           | 0          |
| Express      | 1.7               | 1.0                 | 2.0           | 2.0           | 1.3              | 2.0           | 10.1       |
| Hybrid-N     | 2.0               | 3.0                 | 2.0           | 1.0           | 2.0              | 1.0           | 0          |
| Guardian     | 1.0               | 2.0                 | 1.0           | 2.0           | 3.0              | 2.0           | 0          |
| Defender     | 1.0               | 1.0                 | 1.0           | 2.0           | 2.0              | 3.0           | 1.2        |
| Geneva       | 2.0               | 2.0                 | 2.0           | 2.0           | 1.0              | 1.0           | 0          |
| Sanibel      | 2.0               | 2.0                 | 2.3           | 2.0           | 2.0              | 1.7           | 0          |
| LSD .05      | .31               | .31                 | .31           | NS            | .31              | .31           | 7.0        |

\* Color: 1-green, 2-blue-green, 3-blue, 4-red  
 Uniformity: 1-good, 2-fair, 3-poor  
 Plant Size: 1-small, 2-medium, 3-large  
 Head Shape: 1-pointed, 2-round, 3-flat  
 Uprightness: 1-upright, 2-slightly tipped, 3-very tipped  
 Leaf cover: 1-good, 2-fair, 3-poor

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TABLE 3. --Quality characteristics of cabbage cultivars from Observation Trial - 1978

| Cultivar      | Source        | Harvest Data      |              |              |                       | Plant Characteristics <sup>2</sup> |                          |               |               |                           |               | Head Characteristics |               |                |
|---------------|---------------|-------------------|--------------|--------------|-----------------------|------------------------------------|--------------------------|---------------|---------------|---------------------------|---------------|----------------------|---------------|----------------|
|               |               | Days <sup>1</sup> | Lbs/<br>plot | Lbs/<br>head | %<br>first<br>harvest | Ext.<br>color                      | Plant<br>Uni-<br>formity | Plant<br>size | Head<br>shape | Plant<br>upright-<br>ness | Leaf<br>cover | Core<br>lgth.        | Polar<br>dia. | Equato<br>dia. |
| *Canada Kraut | Stokes        | 106               | 64.1         | 4.27         | 100                   | 1.0                                | 1.0                      | 2.0           | 1.0           | 2.0                       | 3.0           | 3.00                 | 6.87          | 6.18           |
| Jumbo         | Stokes        | 126               | 73.9         | 4.92         | 58                    | 2.0                                | 3.0                      | 3.0           | 2.0           | 3.0                       | 1.0           | 2.37                 | 7.50          | 7.75           |
| Red Head      | Stokes        | 126               | 76.7         | 3.07         | 86                    | 4.0                                | 2.0                      | 2.0           | 2.0           | 2.0                       | 1.0           | 4.00                 | 6.37          | 6.25           |
| Ultra Green   | Stokes        | 126               | 73.4         | 4.59         | 80                    | 2.0                                | 2.0                      | 2.0           | 2.0           | 2.0                       | 1.0           | 2.87                 | 6.37          | 6.25           |
| *Quick Green  | Stokes        | 126               | 43.8         | 3.98         | 100                   | ---                                | ---                      | ---           | ---           | ---                       | ---           | 3.00                 | 6.62          | 6.87           |
| *Ice Queen    | Stokes        | 126               | 32.5         | 3.25         | 100                   | ---                                | ---                      | ---           | ---           | ---                       | ---           | 3.25                 | 6.87          | 7.25           |
| Gourmet       | Stokes        | 103               | 39.5         | 2.82         | 70                    | 2.0                                | 3.0                      | 2.0           | 3.0           | 2.0                       | 1.0           | 2.81                 | 5.93          | 6.19           |
| Baby Head     | Stokes        | 103               | 30.0         | 1.76         | 89                    | 2.0                                | 1.0                      | 1.0           | 2.0           | 2.0                       | 2.0           | 2.62                 | 4.75          | 5.19           |
| XP-1069       | Asgrow        | 103               | 53.2         | 3.13         | 55                    | 2.0                                | 3.0                      | 2.0           | 2.0           | 2.0                       | 2.0           | 2.37                 | 5.93          | 5.56           |
| XP-1058       | Asgrow        | 103               | 61.4         | 3.23         | 73                    | 2.0                                | 2.0                      | 2.0           | 2.0           | 3.0                       | 2.0           | 2.93                 | 5.93          | 5.62           |
| Castle #1     | Castle        | 126               | 55.5         | 2.77         | 62                    | 2.0                                | 3.0                      | 2.0           | 2.0           | 3.0                       | 3.0           | 2.75                 | 5.25          | 5.50           |
| BRR 510-17    | Harris        | 106               | 49.0         | 3.06         | 69                    | 2.0                                | 2.0                      | 2.0           | 2.0           | 3.0                       | 2.0           | 2.31                 | 5.56          | 5.62           |
| 1242          | Harris        | 106               | 42.9         | 2.38         | 86                    | 2.0                                | 3.0                      | 2.0           | 2.0           | 3.0                       | 3.0           | 2.75                 | 5.75          | 6.06           |
| EXP-903       | Northrup-King | 106               | 46.9         | 2.34         | 57                    | 2.0                                | 2.0                      | 2.0           | 2.0           | 3.0                       | 2.0           | 3.25                 | 5.43          | 6.06           |
| EXP-914       | Northrup-King | 106               | 71.6         | 2.86         | 93                    | 1.0                                | 1.0                      | 2.0           | 2.0           | 2.0                       | 1.0           | 3.25                 | 5.75          | 6.25           |
| *EXP-929      | Northrup-King | 106               | 47.0         | 4.27         | 92                    | 2.0                                | 1.0                      | 2.0           | 2.0           | 3.0                       | 2.0           | 2.37                 | 6.18          | 6.19           |

\* Relatively poor stand from field seeding.

1) Days indicates the number of days from seeding to first harvest.

2) Color: 1-green, 2-blue-green, 3-blue, 4-red

Uniformity: 1-good, 2-fair, 3-poor

Plant Size: 1-small, 2-medium, 3-large

Head Shape: 1-pointed, 2-round, 3-flat

Uprightness: 1-upright, 2-slightly tipped, 3-very tipped

Leaf cover: 1-good, 2-fair, 3-poor

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